

NOTE

Ectoparasitic Insects from Migrating Saw-Whet  
Owls (*Aegolius acadicus*) in Central Wisconsin

A total of 833 saw-whet owls (*Aegolius acadicus* Gmelin) were trapped, providing an opportunity to survey these birds for ectoparasitic insects. This is the largest survey of ectoparasitic insects from this bird ever conducted during migration and should provide baseline data for future investigators.

Mist nets were used with a tape-recorded conspecific call to trap migrating saw-whet owls at Linwood Springs Research Station (44°28'N, 89°40'W) in central Wisconsin during their fall and spring nocturnal migrations (IX-23 to XI-08-1997, II-18 to III-26-1998, IX-28 to XI-11-1998, and II-20 to III-27-1999). The birds were placed in temporary holding compartments for less than two hours. Of the 833 trapped owls, 644 were checked for ectoparasitic insects by hand during banding activities. One hundred and sixty-nine of the 644 trapped owls were randomly selected (1/5 of the sample) and extensively examined for a 2-minute period. Collected insects were fixed in 70% ethanol, dehydrated through an ethanol series to xylene, and mounted in Canada Balsam. Voucher specimens are deposited in the National Museum of Natural History, Smithsonian Institution, Washington, DC, accession number TM2014200.

Sixty-four of 644 (9.9%) owls searched during banding and 19/169 (11.2%) when examined for 2 min. were positive for ectoparasitic insects. Hippoboscids (*Icosta americana* Leach, *Ornithoica vicina* Walker, *Ornithomyia fringillina* Curtis) were harbored by 1.7% of the birds, Mallophaga (*Kurodaia acadicae* Price and Beer, *Strigiphilus acadicus* Emerson and Price) by 5.8%, and Siphonaptera (*Cediopsylla sim-*

*plex* Baker, *Orchopeas leucopus* Baker) by 3.8%. Table 1 shows the prevalence of single and multiple infestations during fall and spring migrations of owls.

Except for hippoboscids and a single specimen of *C. simplex* (new host record), all ectoparasites were collected during both fall and spring. The three hippoboscids were only collected during the fall (Table 1). As part of a larger study on Wisconsin hippoboscids during 11 autumns and 6 springs, Mueller et al. (1969. Transactions of the Wisconsin Academy of Sciences, Arts and Letter 57: 189–207) collected two *O. vicina* and two *O. fringillina* from 234 saw-whet owls during migration. These authors also noted that hippoboscids are uncommon or absent during the spring.

*Orchopeas leucopus* was collected from 31 birds. Holland (1985. Memoirs of the Entomological Society of Canada, No. 130, pp. 130, 631) reported *O. leucopus* on 4 saw-whet owls from Ontario, Canada. Specimens of this flea most likely transferred to the owls from rodents, while our sole specimen of *C. simplex* may have come from a rabbit. Rodents and rabbits are natural hosts for these fleas. Forty-eight birds harbored *K. acadicae* and *S. acadicus*. The relatively low numbers of fleas and lice may be explained as follows: Fleas are intermittent parasites on mammalian or avian hosts, and, in the case of raptors, may be accidental. Mallophagans complete their entire life cycle on their host but are extremely small, attach themselves firmly to feathers, and are sometimes difficult to detect on living birds. Additionally, lice may be present only as nits during bird migration (Dogiel. 1964. In General Parasitology. Oliver and Boyd, Edinburgh and London 516 pp.).

Table 1. Number of single and multiple infestations and prevalence of ectoparasitic insects from saw-whet owls.

Ectoparasites	Fall 1997	Spring 1998	Fall 1998	Spring 1999	Parasite Totals
<b>Diptera</b>					
<b>Hippoboscidae</b>					
<i>Icosta americana</i>	2/644 = 0.31%	0/644 = 0.00%	0/644 = 0.00%	0/644 = 0.00%	2
<i>Ornithoica vicina</i>	6/644 = 0.93%	0/644 = 0.00%	0/644 = 0.00%	0/644 = 0.00%	6
<i>Ornithomyia fringillina</i>	2/644 = 0.31%	0/644 = 0.00%	3/644 = 0.47%	0/644 = 0.00%	5
<i>O. vicina</i> , <i>O. fringillina</i>	1/644 = 0.16%	0/644 = 0.00%	0/644 = 0.00%	0/644 = 0.00%	1
<b>Mallophaga</b>					
<b>Menoponidae</b>					
<i>Kurodaia acadicae</i>	3/644 = 0.47%	2/644 = 0.31%	9/644 = 1.40%	0/644 = 0.00%	14
<b>Philopteridae</b>					
<i>Strigiphilus acadicus</i>	10/644 = 1.55%	3/644 = 0.47%	7/644 = 1.09%	0/644 = 0.00%	20
<i>K. acadicae</i> , <i>S. acadicus</i>	1/644 = 0.16%	1/644 = 0.16%	1/644 = 0.16%	0/644 = 0.00%	3
<b>Siphonaptera</b>					
<b>Pulicidae</b>					
<i>Cediopsylla simplex</i>	0/644 = 0.00%	1/644 = 0.16%	0/644 = 0.00%	0/644 = 0.00%	1
<b>Ceratophyllidae</b>					
<i>Orchopeas leucopus</i>	2/644 = 0.31%	8/644 = 1.24%	4/644 = 0.62%	6/644 = 0.93%	20
<b>Multispecies Infestations</b>					
<i>O. leucopus</i> , <i>K. acadicae</i>	2/644 = 0.31%	2/644 = 0.31%	0/644 = 0.00%	0/644 = 0.00%	4
<i>O. leucopus</i> , <i>S. acadicus</i>	0/644 = 0.00%	3/644 = 0.47%	0/644 = 0.00%	3/644 = 0.47%	6
<i>O. leucopus</i> , <i>K. acadicae</i> , <i>S. acadicus</i>	1/644 = 0.16%	0/644 = 0.00%	0/644 = 0.00%	0/644 = 0.00%	1
Seasonal Totals	30	20	24	9	83

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